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The Waste Treatment Plant (WTP) is currently under construction at the Hanford Site. This aerial photograph shows the progress of the Low Activity Waste (LAW) facility in June 2005.

Reducing the Risk

Waste Treatment Plant..... Vitrification: turning waste into glass

In June 2002, workers poured the first yard of concrete for the Waste Treatment Plant (WTP), a facility designed to treat the more than 53 million gallons of hazardous and high-level radioactive nuclear waste currently being stored in 177 aging tanks at the Hanford Site. The start of construction was the culmination of more than a decade of effort by the state of Washington and the U.S. Government to build a facility capable of treating the waste and reducing the risk posed to people and the environment.

The WTP is projected to begin processing the waste in 2011 by removing it from the old storage tanks, treating it, and immobilizing it in glass logs through vitrification. The WTP is the cornerstone to Hanford cleanup and the state of Washington is working diligently to promote a timely launch for the WTP operations.

- Amount of waste that needs to be treated: 53 million gallons
- Amount of waste that the WTP will be able to treat each day: 36 metric tons
- Final temperature of the waste/molten glass mixture before entering the storage containers: 2,100 degrees Fahrenheit

Currently, the Hanford Site is home to 177 tanks that were built as early as the 1940s. These tanks have exceeded their life expectancy and are believed to have leaked more than one million gallons of hazardous and radioactive waste into the ground. Eventually, this waste may reach the Columbia River. The WTP is critical in helping to clean up the Hanford Site and reducing the possibility of further threats to the environment and people of the Columbia River.

What is vitrification? Vitrification is the process by which a liquid is turned into glass. The tank waste will mix with molten glass and be poured into stainless steel containers for cooling and storage. The waste will be safely stored in glass form while the radioactivity levels decrease over hundreds to thousands of years.

For additional information: http://www.ecy.wa.gov/programs/nwp/

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